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SECTION 1  
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PRODUCT IDENTIFIER            HD 0018            ICI COLORANT - HD TITANIUM WHITE (KX)  
DATE OF PREPARATION        JUNE 28, 2002  
PRODUCT USE                PROTECTIVE COATING

MANUFACTURED BY:    ICI PAINTS NORTH AMERICA, 925 EUCLID AVENUE,  
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EMERGENCY AND MSDS TELEPHONE NUMBER:  
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MSDS PREPARED BY:    PRODUCT SAFETY AND TOXICOLOGY DEPARTMENT  
                         ICI PAINTS NORTH AMERICA

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS  
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	INGREDIENT	WT. %:
CHEMICAL NAME	1,2-ETHANEDIOL	10-20
COMMON NAME :	ETHYLENE GLYCOL	
CAS NUMBER:	107-21-1	
CHEMICAL NAME	POLY(OXY-1,2-ETHANEDIYL, ALPHA-4-NONYLPHENYL) -	1-5
	OMEGA-HYDROXY-, BRANCHED	
COMMON NAME :	GLYCOL ETHER	
CAS NUMBER:	127087-87-0	
CHEMICAL NAME	KAOLIN	5-10
COMMON NAME :	CLAY	
CAS NUMBER:	1332-58-7	
CHEMICAL NAME	TITANIUM OXIDE	50-60
COMMON NAME :	TITANIUM DIOXIDE	
CAS NUMBER:	13463-67-7	
CHEMICAL NAME	ALUMINUM HYDROXIDE	1-5
COMMON NAME :	ALUMINUM HYDROXIDE	
CAS NUMBER:	21645-51-2	
CHEMICAL NAME	SILICA	1-5

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS  
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COMMON NAME : AMORPHOUS SILICA  
CAS NUMBER: 7631-86-9

CHEMICAL NAME WATER 10-20  
COMMON NAME : WATER  
CAS NUMBER: 7732-18-5

CHEMICAL NAME LECITHINS 1-5  
COMMON NAME : LECITHIN  
CAS NUMBER: 8002-43-5

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SECTION 3: HAZARDS IDENTIFICATION  
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PRIMARY ROUTE(S) OF EXPOSURE  
INHALATION, SKIN CONTACT, EYE CONTACT, INGESTION.

EFFECTS OF OVEREXPOSURE

INHALATION PROLONGED INHALATION MAY LEAD TO MUCOUS MEMBRANE IRRITATION, DROWSINESS, DIZZINESS AND/OR LIGHTHEADEDNESS, HEADACHE, COUGHING, CENTRAL NERVOUS SYSTEM DEPRESSION, KIDNEY DAMAGE.

SKIN CONTACT IRRITATION OF SKIN. PROLONGED OR REPEATED CONTACT CAN CAUSE DERMATITIS, DEFATTING. POSSIBLE SENSITIZATION TO SKIN.

EYE CONTACT IRRITATION OF EYES. PROLONGED OR REPEATED CONTACT CAN CAUSE CONJUNCTIVITIS.

INGESTION INGESTION MAY CAUSE DIZZINESS AND/OR LIGHTHEADEDNESS, HEADACHE, VOMITING, DIARRHEA, GASTRO-INTESTINAL DISTURBANCES, SEVERE ABDOMINAL PAIN, APATHY, CENTRAL NERVOUS SYSTEM DEPRESSION, RESPIRATORY PROBLEMS, INTOXICATION, KIDNEY DAMAGE, PULMONARY EDEMA, LOSS OF CONSCIOUSNESS, ACUTE POISONING, RESPIRATORY FAILURE, CARDIAC FAILURE, BRAIN DAMAGE.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE  
EYE, SKIN, RESPIRATORY DISORDERS  
LUNG DISORDERS  
KIDNEY DISORDERS

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**SECTION 4: FIRST-AID MEASURES**

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**INHALATION** REMOVE TO FRESH AIR. RESTORE AND SUPPORT CONTINUED BREATHING.  
GET EMERGENCY MEDICAL ATTENTION.  
HAVE TRAINED PERSON GIVE OXYGEN IF NECESSARY. GET MEDICAL HELP FOR ANY BREATHING DIFFICULTY.  
REMOVE TO FRESH AIR IF INHALATION CAUSES EYE WATERING, HEADACHES, DIZZINESS, OR OTHER DISCOMFORT.

**SKIN CONTACT** WASH THOROUGHLY WITH SOAP AND WATER. IF ANY PRODUCT REMAINS, GENTLY RUB PETROLEUM JELLY, VEGETABLE OR MINERAL/BABY OIL ONTO SKIN. REPEATED APPLICATIONS MAY BE NEEDED. REMOVE CONTAMINATED CLOTHING.  
WASH CONTAMINATED CLOTHING BEFORE RE-USE.

**EYE CONTACT** FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER, ESPECIALLY UNDER LIDS FOR AT LEAST 15 MINUTES. IF IRRITATION OR OTHER EFFECTS PERSIST, OBTAIN MEDICAL TREATMENT.

**INGESTION** IF SWALLOWED, OBTAIN MEDICAL TREATMENT IMMEDIATELY.

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**SECTION 5: FIRE-FIGHTING MEASURES**

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**FLASH POINT (SETA)** ABOVE 200F/93C LOWER EXPLOSIVE LIMIT NOT AVAILABLE  
UPPER EXPLOSIVE LIMIT 15.3 (%)

**FIRE EXTINGUISHING MEDIA**  
DRY CHEMICAL OR FOAM  
WATER FOG.  
CARBON DIOXIDE.

**UNUSUAL FIRE AND EXPLOSION HAZARDS**  
CLOSED CONTAINERS MAY BURST IF EXPOSED TO EXTREME HEAT OR FIRE.

**FIRE FIGHTING PROCEDURES**  
WATER MAY BE USED TO COOL AND PROTECT EXPOSED CONTAINERS.  
FIREFIGHTERS SHOULD USE FULL PROTECTIVE CLOTHING, EYE PROTECTION, AND SELF-CONTAINED BREATHING APPARATUS.  
SELF-CONTAINED BREATHING APPARATUS RECOMMENDED.

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**SECTION 5: FIRE-FIGHTING MEASURES**

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**HAZARDOUS DECOMPOSITION OR COMBUSTION PRODUCTS**

CARBON MONOXIDE, CARBON DIOXIDE, OXIDES OF NITROGEN, ACRID FUMES, PHOSPHOROUS.

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**SECTION 6 ACCIDENTAL RELEASE MEASURES**

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**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

COMPLY WITH ALL APPLICABLE HEALTH AND ENVIRONMENTAL REGULATIONS.

ELIMINATE ALL SOURCES OF IGNITION. VENTILATE AREA. SPILLS MAY BE COLLECTED WITH ABSORBENT MATERIALS. PLACE COLLECTED MATERIAL IN PROPER CONTAINER.

COMPLETE PERSONAL PROTECTIVE EQUIPMENT MUST BE USED DURING CLEANUP.

LARGE SPILLS - SHUT OFF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN SPILL. PUMP TO STORAGE OR SALVAGE VESSELS. USE

ABSORBENT TO PICK UP EXCESS RESIDUE. KEEP SALVAGEABLE MATERIAL AND RINSE WATER OUT OF SEWERS AND WATER COURSES.

SMALL SPILLS - USE ABSORBENT TO PICK UP RESIDUE AND DISPOSE OF PROPERLY.

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**SECTION 7 HANDLING AND STORAGE**

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**HANDLING AND STORAGE**

STORE BELOW 100F (38C). KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. KEEP FROM FREEZING.

**OTHER PRECAUTIONS** USE ONLY WITH ADEQUATE VENTILATION. DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. AVOID CONTACT WITH SKIN AND EYES, AND BREATHING OF VAPORS. WASH HANDS THOROUGHLY AFTER HANDLING, ESPECIALLY BEFORE EATING OR SMOKING. KEEP CONTAINERS TIGHTLY CLOSED AND UPRIGHT WHEN NOT IN USE.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION  
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COMMON NAME : ETHYLENE GLYCOL  
CAS NUMBER: 107-21-1  
ACGIH (STEL) : C 100 MG/M3

COMMON NAME : CLAY  
CAS NUMBER: 1332-58-7  
ACGIH (TWA) : 2 MG/M3 OSHA (TWA) : 5 MG/M3

COMMON NAME : TITANIUM DIOXIDE  
CAS NUMBER: 13463-67-7  
ACGIH (TWA) : 10 MG/M3 OSHA (TWA) : 10 MG/M3

COMMON NAME : ALUMINUM HYDROXIDE  
CAS NUMBER: 21645-51-2  
ACGIH (TWA) : 10 MG/M3 OSHA (TWA) : 5 MG/M3

COMMON NAME : AMORPHOUS SILICA  
CAS NUMBER: 7631-86-9  
ACGIH (TWA) : 10 MG/M3 OSHA (TWA) : 6 MG/M3

## RESPIRATORY PROTECTION

CONTROL ENVIRONMENTAL CONCENTRATIONS BELOW APPLICABLE EXPOSURE STANDARDS WHEN USING THIS MATERIAL. WHEN RESPIRATORY PROTECTION IS DETERMINED TO BE NECESSARY, USE A NIOSH/MSHA (CANADIAN Z94.4) APPROVED ELASTOMERIC SEALING-SURFACE FACEPIECE RESPIRATOR OUTFITTED WITH ORGANIC VAPOR CARTRIDGES AND PAINT SPRAY (DUST/MIST) PREFILTERS. DETERMINE THE PROPER LEVEL OF PROTECTION BY CONDUCTING APPROPRIATE AIR MONITORING. CONSULT 29CFR1910.134 FOR SELECTION OF RESPIRATORS (CANADIAN Z94.4).

VENTILATION PROVIDE DILUTION VENTILATION OR LOCAL EXHAUST TO PREVENT BUILD-UP OF VAPORS.

## PERSONAL PROTECTIVE EQUIPMENT

EYE WASH, SAFETY SHOWER, SAFETY GLASSES OR GOGGLES.  
IMPERVIOUS GLOVES, IMPERVIOUS CLOTHING.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES  
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VAPOR PRESSURE:	NOT AVAILABLE	SPECIFIC GRAVITY:	1.984
BOILING RANGE:	212-500F/ -260C	WEIGHT PER GALLON:	16.53/ 19.85IMP
%VOLATILE BY VOLUME:	51.11		
PHYSICAL STATE:	LIQUID	APPEARANCE	WHITE
SOLUBILITY IN WATER:	NOT AVAILABLE	PH:	NOT AVAILABLE

  
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SECTION 10: STABILITY AND REACTIVITY  
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## UNDER NORMAL CONDITIONS

STABLE

SEE SECTION 5 FIRE FIGHTING MEASURES

## MATERIALS TO AVOID

OXIDIZERS.

STYRENE MONOMER

## CONDITIONS TO AVOID

CONTACT WITH OXIDIZING AGENT, FREEZING, OPEN FLAME.

## HAZARDOUS POLYMERIZATION

WILL NOT OCCUR

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SECTION 11: TOXICOLOGICAL INFORMATION  
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COMMON NAME : ETHYLENE GLYCOL

CAS NUMBER: 107-21-1

CARCINOGENICITY LISTED BY: NTP NO

IARC NO

OSHA NO

ACGIH NO

LD50: 4700.00 MG/KG ORL RAT

LD50: 5500.00 MG/KG ORL MOU

COMMON NAME : GLYCOL ETHER

CAS NUMBER: 127087-87-0

CARCINOGENICITY LISTED BY: NTP NO

IARC NO

OSHA NO

ACGIH NO

COMMON NAME : CLAY

CAS NUMBER: 1332-58-7

CARCINOGENICITY LISTED BY: NTP NO

IARC NO

OSHA NO

ACGIH NO

COMMON NAME : TITANIUM DIOXIDE

CAS NUMBER: 13463-67-7

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SECTION 11: TOXICOLOGICAL INFORMATION  
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CARCINOGENICITY LISTED BY:	NTP NO	IARC NO	OSHA NO	ACGIH NO
LD50:	24.00 GM/KG ORL RAT			
LC50:	6820.00 MG/M3/4HR IHL RAT			

COMMON NAME : ALUMINUM HYDROXIDE

CAS NUMBER: 21645-51-2

CARCINOGENICITY LISTED BY:	NTP NO	IARC NO	OSHA NO	ACGIH NO
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COMMON NAME : AMORPHOUS SILICA

CAS NUMBER: 7631-86-9

CARCINOGENICITY LISTED BY:	NTP NO	IARC NO	OSHA NO	ACGIH NO
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COMMON NAME : LECITHIN

CAS NUMBER: 8002-43-5

CARCINOGENICITY LISTED BY:	NTP NO	IARC NO	OSHA NO	ACGIH NO
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## SUPPLEMENTAL HEALTH INFORMATION

NO ADDITIONAL EFFECTS ARE ANTICIPATED

CARCINOGENICITY NO CARCINOGENIC EFFECTS ARE ANTICIPATED

## REPRODUCTIVE EFFECTS

NO REPRODUCTIVE EFFECTS ARE ANTICIPATED

MUTAGENICITY NO MUTAGENIC EFFECTS ARE ANTICIPATED

TERATOGENICITY SOME LABORATORY TEST RESULTS HAVE SHOWN ETHYLENE GLYCOL TO BE AN ANIMAL TERATOGEN.

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SECTION 12: ECOLOGICAL INFORMATION  
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NO ECOLOGICAL TESTING HAS BEEN DONE BY ICI PAINTS ON THIS PRODUCT AS A WHOLE.

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SECTION 13: DISPOSAL CONSIDERATIONS  
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WASTE DISPOSAL      DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.  
                      AVOID DISCHARGE TO NATURAL WATERS.

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SECTION 14: TRANSPORT INFORMATION  
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DOT                    PAINT \*\* PROTECT FROM FREEZING \*\*

IMDG                  NOT AVAILABLE

IATA                  NOT AVAILABLE

TDG                  NOT AVAILABLE

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SECTION 15: REGULATORY INFORMATION  
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		SARA 302	SARA 313	CERCLA 302.4	HAZ AIR POLLUTANT	MARINE POLTNT
CAS NUMBER:	107-21-1	NO	YES	YES	YES	NO
COMMON NAME :	ETHYLENE GLYCOL					
CAS NUMBER:	127087-87-0	NO	YES	NO	YES	NO
COMMON NAME :	GLYCOL ETHER					

AS OF THE DATE OF THIS MSDS, ALL OF THE COMPONENTS IN THIS  
PRODUCT ARE LISTED (OR ARE OTHERWISE EXEMPT FROM LISTING)  
ON THE TSCA INVENTORY.  
THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE  
HAZARD CRITERIA OF THE CPR (CONTROLLED PRODUCTS REGULATIONS)  
AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE  
CPR.



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SECTION 16: OTHER INFORMATION  
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THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE AT THE TIME OF PREPARATION OF THIS DATA SHEET AND WHICH ICI PAINTS BELIEVES TO BE RELIABLE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA. ICI PAINTS SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS INFORMATION, OR OF ANY PRODUCT, METHOD OR APPARATUS MENTIONED AND YOU MUST MAKE YOUR OWN DETERMINATION OF ITS SUITABILITY AND COMPLETENESS FOR YOUR OWN USE, FOR THE PROTECTION OF THE ENVIRONMENT, AND THE HEALTH AND SAFETY OF YOUR EMPLOYEES AND USERS OF THIS MATERIAL.  
COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD  
29CFR1910.1200.